Anatomy Primer

The Shoulder Complex

by Andrew Sullivan, PT, DPT, ScD, OCS, SCS, FAAOMPT; Kaitlyn Buzza, PT, DPT, SCS; Nicholas Perry, SPT; and Sydney Abitanto, SPT

INTRODUCTION

An understanding of human anatomy is vital for clinical practice in the fields of exercise science, allied health, and sports medicine, and a thorough understanding necessitates ongoing review to optimize learning. The study of human anatomy primarily consists of resources containing drawings and diagrams that are intended to provide a representation of anatomical structures, but these resources are limited in their ability to fully represent the organizational relationships in the human body. The use of cadaveric specimens is a common practice in the study of human anatomy because the specimens provide a realistic visualization that increases appreciation for the organizational relationships between anatomical structures to facilitate the teaching and learning of human anatomy. The purpose of this anatomy primer is to use pictures and videos of cadaveric specimens to provide a realistic visualization of anatomical structures for the review of muscular and neurovascular anatomy of the shoulder, including the origin, insertion, action, and innervation of the muscles, as well as the pathways of neurovascular structures. This primer is intended to be used as an educational resource for students, educators, and exercise and medical professionals in their ongoing study of human anatomy and advancement of clinical practice to better serve their patients and clients.

Objectives:

- Review the muscles and neurovascular structures of the shoulder
- Describe the origin, insertion, and action of the muscles of the shoulder
- Identify specific neurovascular structures and innervation of the shoulder
- Visualize organizational relationships of anatomical structures of the shoulder

- Part 1: Review of the muscles of the posterior shoulder (1–3)
  - Superficial muscles of the posterior shoulder
    - Video with review of origin, insertion, and action (Video 1, http://links.lww.com/FIT/A369)
    - Pictures with key of anatomical structures (Figure 1, http://links.lww.com/FIT/A375)
    - See Table 1 (http://links.lww.com/FIT/A376) for a key of the anatomical structures associated with this portion of the primer
  - Deep muscles of the posterior shoulder
    - Video with review of origin, insertion, and action (Video 2, http://links.lww.com/FIT/A370)
    - Pictures with key of anatomical structures (Figure 2, http://links.lww.com/FIT/A377)
    - See Table 2 (http://links.lww.com/FIT/A378) for a key of the anatomical structures associated with this portion of the primer

- Part 2: Review of the muscles of the anterior shoulder (1–3)
  - Superficial muscles of the anterior shoulder
    - Video with review of origin, insertion, and action (Video 3, http://links.lww.com/FIT/A371)
    - Pictures with key of anatomical structures (Figure 3, http://links.lww.com/FIT/A379)
    - See Table 3 (http://links.lww.com/FIT/A380) for a key of the anatomical structures associated with this portion of the primer
  - Deep muscles of the anterior shoulder
    - Video with review of origin, insertion, and action (Video 4, http://links.lww.com/FIT/A372)
    - Pictures with key of anatomical structures (Figure 4, http://links.lww.com/FIT/A381)
    - See Table 4 (http://links.lww.com/FIT/A382) for a key of the anatomical structures associated with this portion of the primer

- Part 3: Review of the neurovascular structures of the shoulder (1–3)
  - Video review of neurovascular structures of the posterior shoulder (Video 5, http://links.lww.com/FIT/A373)
  - Video review of neurovascular structures of the anterior shoulder (Video 6, http://links.lww.com/FIT/A374)

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2. Drake RL, Vogl W, Mitchell AWM. *Gray's Anatomy for Students*. 5th ed. Philadelphia (PA): Elsevier Churchill Livingstone; 2023.
3. Gilroy AM, MacPherson BR, Ross LM. *Atlas of Anatomy*. 4th ed. New York (NY): Thieme Medical Publishers; 2020.

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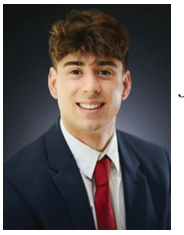
Andrew Sullivan, PT, DPT, ScD, OCS, SCS, FAAOMPT, *is a clinical assistant professor and the director of the Human Anatomy Lab at Sacred Heart University. Dr. Sullivan completed his Bachelor of Science in Exercise Science, Doctor of Physical Therapy, and Orthopedic Physical Therapy Residency at Sacred Heart University. Dr. Sullivan went on to complete the Orthopedic Fellowship and Sports Rehabilitation program with Kaiser Permanente and attained his Doctor of Science in Physical Therapy from Texas Tech University. Dr. Sullivan is an orthopedic clinical specialist (OCS), sports clinical specialist (SCS), and Fellow of the American Academy of Orthopedic Manual Physical Therapists (FAAOMPT).*

Kaitlyn Buzza, PT, DPT, SCS, *earned a Doctor of Physical Therapy degree from the University of Pittsburgh and completed Sports Residency training with Massachusetts General Hospital/Northeastern University. In addition to her role as a clinical assistant professor at Sacred Heart University, Dr. Buzza is active in clinical practice and provides care to patients with a variety of conditions. Dr. Buzza's primary clinical interests are sports physical therapy, the lower extremity, and biomechanical movement analysis.*



Nicholas Perry, SPT, *holds a Bachelor of Science in Economics with a minor in Statistics from the University of Connecticut. Nicholas is currently a Doctor of Physical Therapy student at Sacred Heart University where he serves as a graduate assistant for anatomy and physiology. Nicholas holds certifications as a NASM Certified Personal Trainer and a NSCA Certified Strength and Conditioning Specialist (CSCS).*

Sydney Abitanto, SPT, *holds a Bachelor of Science in Exercise Science from Sacred Heart University where she graduated second in her class and was part of the Thomas Moore Honors Program. Sydney is currently a Doctor of Physical Therapy student at Sacred Heart University and serves as a graduate assistant for anatomy and physiology. Sydney is a NCAA Division I pole vaulter and blends her athletic experience with a passion for anatomy and physical rehabilitation.*

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